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1. SHIP INFORMATION

1101 General Characteristics

SIRIUS is a double-hull “Handymax” Products Tanker, built to Lloyd’s Register standards by the Hyundai Mipo Dockyard in Korea. She was bought new by the RAN in June 2004, as the MT DELOS. The ship was subsequently leased to TK Marine Services from July 2004 till September 2005 for use as an oil tanker. A contract was awarded to TENIX Defence to convert MV DELOS to the AO SIRIUS by 15 September 2006. SIRIUS was commissioned on 16 September 2006 at her home base, Fleet Base West. The Ship has an end of life for planning purposes of 2023. SIRIUS has a billeted complement of 65.

1102 Dimensions

SIRIUS’ dimensions and tonnage are provided for reference:

Length	191.3m
Beam	31m
Draft (Maximum)	11 m
Scantling Draught	12.2m
Light displacement	8,585 tonnes
Loaded displacement	46,017 tonnes
Maximum Speed	16 kts (load and wx dependant)
Fair Weather Routing Speed	13 kts
Foul Weather Routing	11 kts
Economical Speed	13 kts
RAS Speed	13 to 15 kts

1103 Liquid Cargo Capacity

SIRIUS’ liquid cargo capacity is provided below for reference:

Max F-76 (Diesel)	~29000 CZ
Max F-44 (AVCAT)	~5500 CZ
Max HFO (Heavy Fuel Oil)	~1240 CZ
Max H20 (Water)	~196CZ

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SIRIUS does not carry potable water but may supply limited amounts from her own tanks in-extremis.

2. SIRIUS is fitted with an inert gas system that provides the capability to transport low flashpoint fuels in bulk – this means that SIRIUS is able to carry other ADF fuels apart from F76 or F44. Unleaded Petrol/Gasoline (MOGAS) or F34 AVTUR could be carried if required for the operation.

3. SIRIUS' cargo tanks are fitted with an electronic level management system however it lacks the fidelity to provide accurate cargo transfer information when replenishing. In order to determine accurate cargo transfer volumes customer ships are requested to signal to SIRIUS the quantity of cargo embarked following replenishment.

1104 Solid Cargo

SIRIUS is capable of embarking 12 Type 1C 20ft ISO containers on the container deck. Power outlets are available to all container points to enable 12 refrigerated containers to be carried if required. Two more dry containers can be carried on the forward end of the flight deck without interfering with the ship's VERTREP capability. SIRIUS has a Heavy Jackstay receive only capability. The preferred method of transferring cargo is via VERTREP (day only). A maximum of 300kg of limited cargo may be transported via SIRIUS' two 7.2m J3 Jet RHIBs.

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In accordance with ATP 1D Vol I, SIRIUS' ranges and bearings for manoeuvring purposes should be measured from the foremast located on the Focsle. Unfortunately the foremast is at a height less than that of the bridge or RAS King Posts and cannot be viewed clearly from the quarters and is completely wooded from astern.

SIRIUS' boot topping represents the 10.5m draught mark. The following heights are listed for SIRIUS' average draught of 9m:

Masthead to Waterline:	131 Feet
Funnel to Waterline:	86 Feet
RAS Rigs to Waterline:	102 Feet
Masthead Obstruction Light to Side Light:	82 Feet
Main Masthead to Side Light:	63 Feet
Forward Masthead Light to Main Masthead Light:	15 Feet
Forward Masthead Light to Side Light:	24 Feet
Masthead Obstruction Light to Main Masthead Light:	19 Feet
Masthead Obstruction Light to Stern Light:	104 Feet

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Boat transfers. SIRIUS carries two 7.2m J3 Jet RHIBs that are able to be launched simultaneously, weather conditions allowing. Both sea boats are launched from 6-tonne

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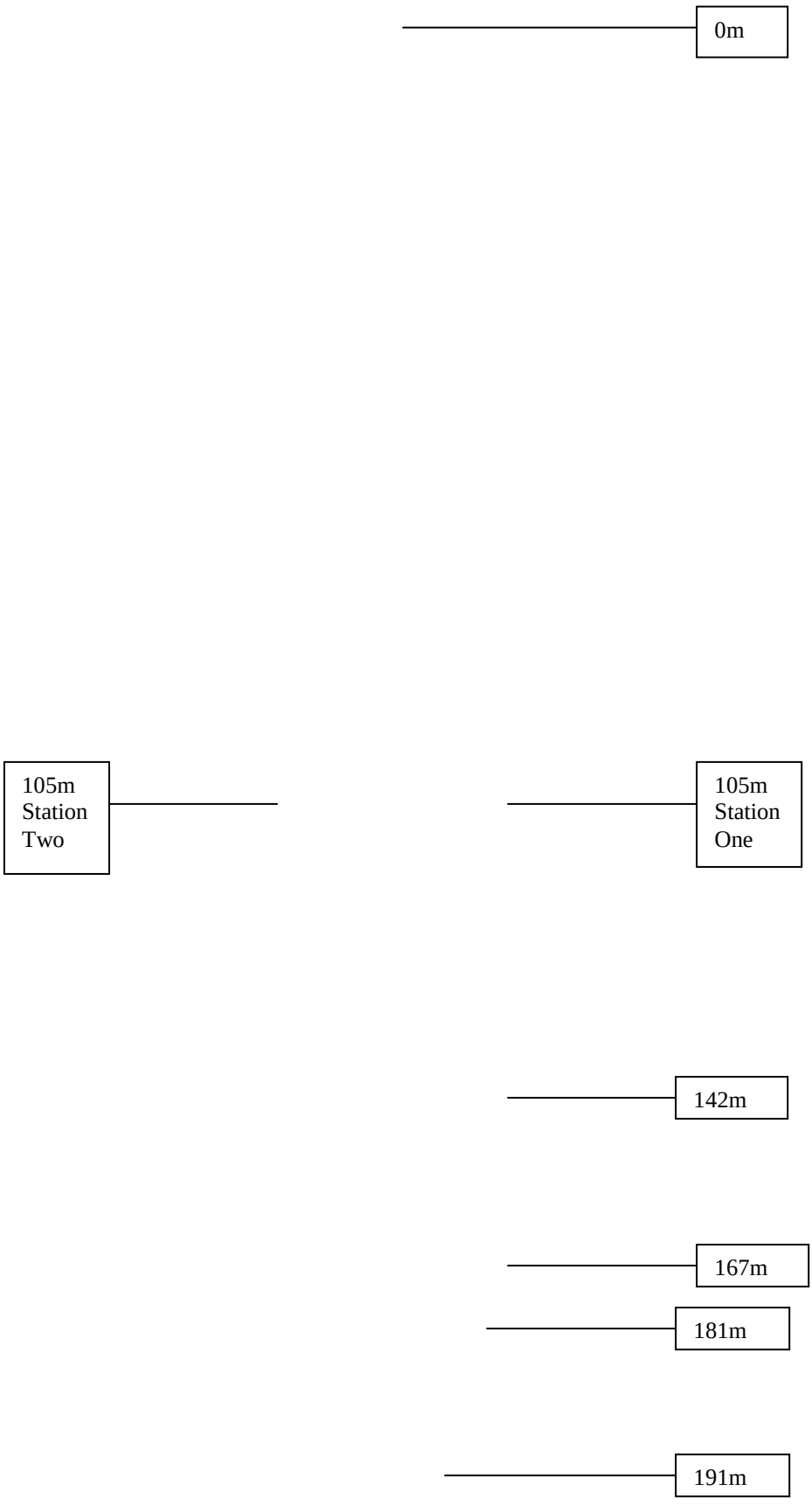
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1. POSITION OF RIGS



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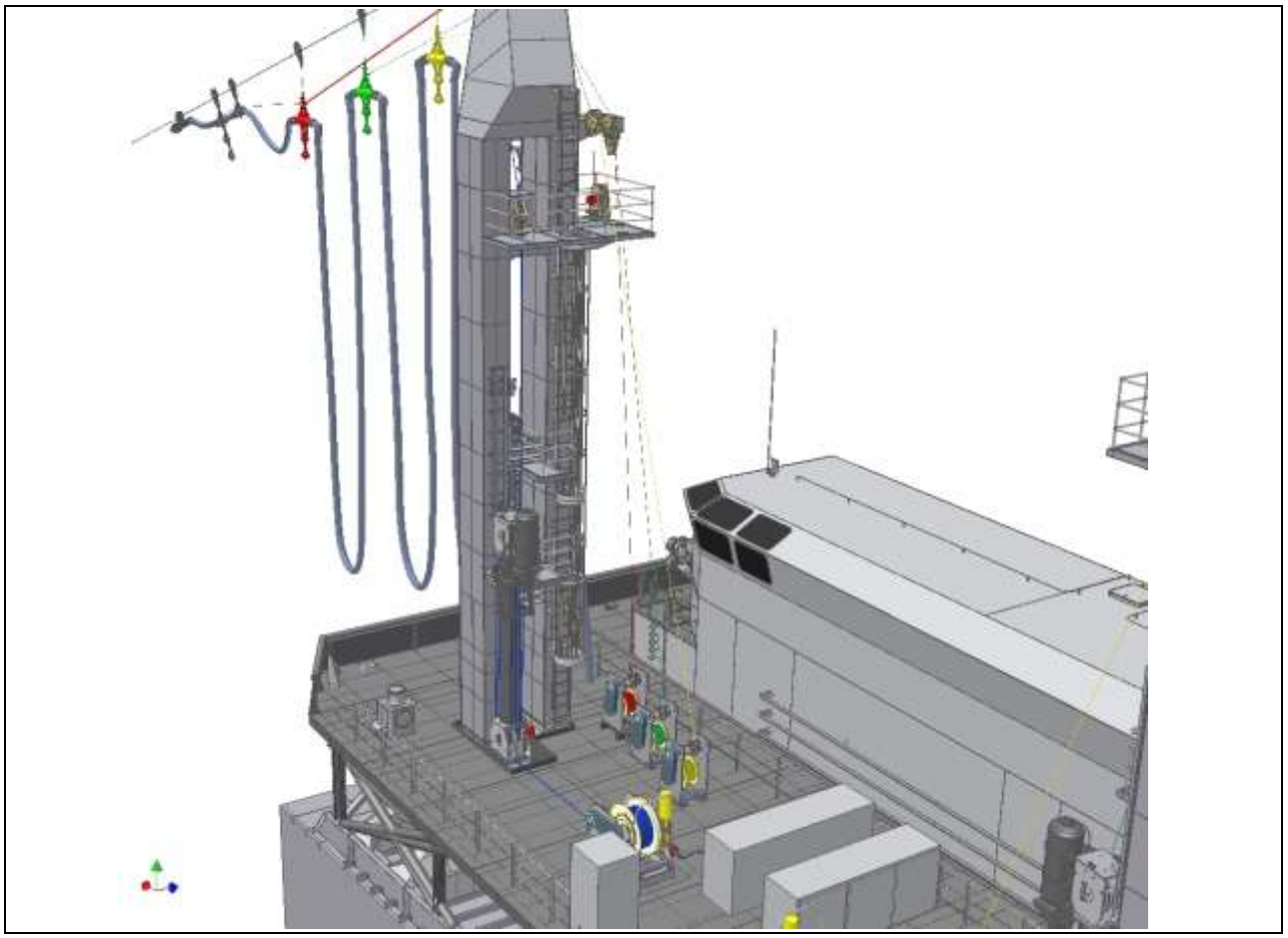
2201 Replenishment System Arrangement

SIRIUS is configured with a Rexroth replenishment at sea system enabling the ship to provide F76, F44 and Water via two NATO STREAM (Standard Tensioned Replenishment Alongside Method) rigs simultaneously in conditions up to and including sea-state 6. The fittings utilised are as follows:

The following standard fittings are used for the transfer of liquids:

a. Fresh Water - NATO 5 65mm (4") STORZ Coupling
b. F44 (Avcat) - NATO 3 65mm (4") Quick Release Coupling/JC Carter Coupling
c. F76 (Diesel) - NATO 1 178mm (7") Probe

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RAS Station 1 - Elevated view looking to starboard from forward

2202 Travelling Pad-eye assembly

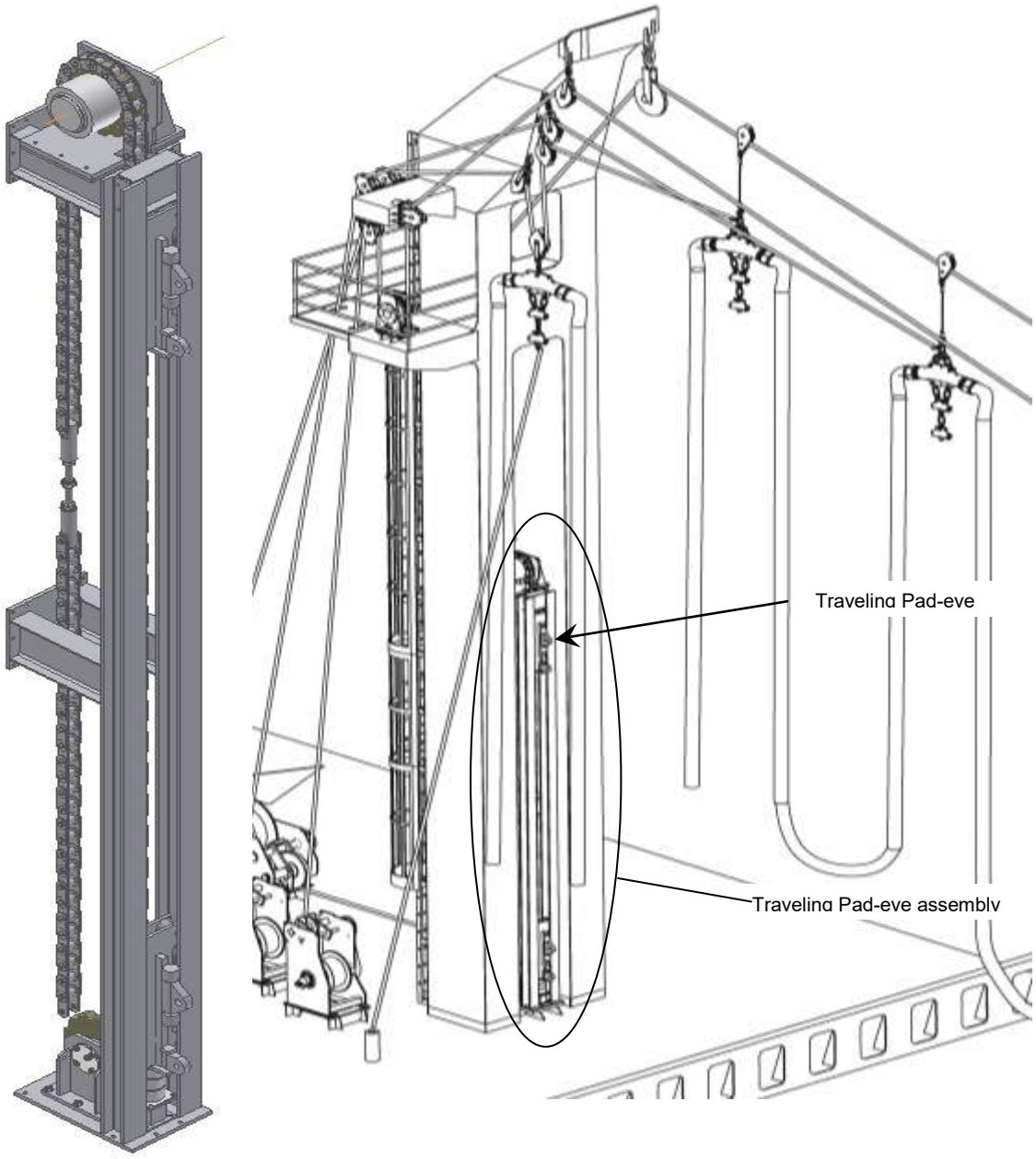
The connection point or pad-eye can be adjusted in vertical direction by means of a chain connected to the pad-eye. This chain is driven by a hydraulic actuated (hydraulic rotary drive) sprocket.

The RAS mast design includes a connection point to connect a jackstay for:

a. Light Jackstay Receive; and

b. Heavy Jackstay Receive.

SIRIUS is not yet fitted to deliver a Heavy Jackstay Rig and lacks the man-power to act as the Delivering ship for a Light Jackstay.



Travelling Pad-eye assembly (planned design)

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2203 Rig Tolerances

SIRIUS' RAS System is designed with the following scope of movement fore, aft and laterally from the king post position:

a.	Normal operation	+/– 30^0
b.	Maximum scope	+/– 45^0
c.	Normal lateral displacement range	130ft to 180ft
c.	Maximum lateral displacement	280ft (max outboard hose length)

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In addition to the container stowage, deck cargo can be carried if necessary. The RAS deck can be used to carry up to 40 x 205 litre drums of non-flammable liquids. Space exists on the container deck and tank deck for the carriage of items such as fenders and equipment or pallets of stores not affected by weather. Vehicles and other bulky items can be carried on the flight deck and chained down, this configuration will limit VERTREP / Transfer capabilities.

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SIRIUS is Level III Class 4/5/7 VERTREP/Transfer hovering area. The only ADF helicopters that are cleared to operate over SIRIUS are as follows:

a. S70B2 Seahawk;

b. S70A9 Blackhawk; and

c. CH-47D Chinook (Single hook only).

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The flight deck is fitted with deck lights, deck wash lights and outline lights, however the ship is not cleared for night VERTREP/Transfer operations.

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6102 Ship Dimension Data

Dimension data relative to wharf interfaces is as follows:

a. Stem (bow) to standard (bridge marker) 142.5 metres, bow to accommodation front;

b. Stem to primary gangway 143 metres;

c. Stem to shore power connection 167 metres (connection on starboard side);

d. Stem to fuelling connection (ie) when embarking fuel, not RAS:

(i) MDO: 95.535 metres; and

(ii) HFO: 94.335 metres,

e. Stem to sewage outlet 153.95 metres (connection on starboard side);

f. Stem to NINSHORE connection 142 metres.

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